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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,765	07/25/2000	Walid M. Ahmed	2925-0484P	7384
30594	7590	11/17/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			RYMAN, DANIEL J	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	

2665

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/624,765

Applicant(s)

AHMED ET AL.

Examiner

Daniel J. Ryman

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 6, 8 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. In view of the Appeal Brief filed on 16 September 2005, PROSECUTION IS HEREBY REOPENED. A rejection of claims 1-13 is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7, 9, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 7, 9, and 11 contain the following limitation: "the signal strength of the base station in the active list." Claims 5, 8, and 10, which claims 7, 9, and 11, depend upon, respectively, disclose that "the active list contains two or more base stations." It is unclear to

Art Unit: 2665

which “base station in the active list” claims 7, 9, and 11 refer since claims 5, 8, and 10 disclose that the active list contains at least two base stations.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chheda et al (USPN 6,038,448).

7. Regarding claim 1, Chheda discloses a method of processing handoff information (PSMM: pilot strength measurement message, see col. 6, lines 14-27 and col. 2, line 63-col. 2, line 7) at a network (col. 8, lines 19-42) including a base station and a mobile switching center (col. 5, lines 20-24), comprising: receiving, at the network, handoff information (PSMM) of a mobile station (Fig. 8b; col. 8, lines 19-42; and col. 13, line 49-col. 14, line 2), the handoff information indicating at least a number of base stations in an active list of the mobile station (col. 6, lines 23-27 and col. 12, lines 64-65), the active list being a list of base stations involved in a call of the mobile station (col. 7, lines 17-19); applying a rules set to the handoff information to determine changes in the active list (col. 13, lines 51-60), the rules set requiring more stringent conditions be met to add a base station to the active list when the active list includes a first number of base stations as compared to when the active list includes a second number of base stations, the first number being greater than the second number (Fig. 9; col. 15, lines 31-64)

Art Unit: 2665

where D2 is less stringent than D3 and D3 is less stringent than D4, D5, and D6; and sending determination results to the mobile station (col. 13, line 66-col. 14, line 2).

Chheda does not expressly disclose in the primary embodiments that the handoff information is soft handoff information. However, Chheda does disclose using handoff information (PSMM) (col. 2, line 63-col. 2, line 7 and col. 6, lines 14-27). Chheda also discloses the use of soft handoffs in order to reduce the probability of a dropped call (col. 6, line 54-col. 7, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the handoff information be soft handoff information since soft handoffs reduce the probability of a dropped call.

Chheda does not expressly disclose in the primary embodiments that the base station processes the handoff information. However, Chheda does disclose that the network processes the handoff information (col. 8, lines 19-42) where the network includes a base station and a mobile switching center (col. 5, lines 20-24). Chheda also discloses that the base station determines "whether to establish a connection between the mobile unit and one of the base stations based upon the difference in strength between the strongest pilot signal and a corresponding weaker pilot signal (claims 31 and 40). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the base station process the handoff information since Chheda discloses in one embodiment that the base station determines whether to establish a connection or not.

8. Regarding claim 2, Chheda discloses that the applying step applies the rules set to base stations in a potentials list (candidate set), the potentials list being a list of base stations which are potential base stations for the active list (col. 7, lines 9-22 and col. 14, lines 51-61).

Art Unit: 2665

9. Regarding claim 3, Chheda discloses that the potentials list is the candidate list in IS-95 standards (col. 7, lines 6-22).

10. Regarding claim 4, Chheda discloses that the applying step moves a potential base station from the potentials list to the active list when the active list contains one base station and the difference in magnitude between the one base station and the potential base station is less than a first threshold (D2) (col. 13, line 49-col. 14, line 2 and col. 15, lines 31-47). Chheda does not expressly disclose that the potential base station has a signal strength greater than a first threshold. However, Chheda does disclose that the “determinations each include using the relative strengths of the pilot signals in determining which connections to establish, which connections to maintain, and which connections to drop. Additional criterion could also look at the absolute strength of the pilot signals contained in the PSMM” (col. 8, lines 30-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the potential base station have a signal strength greater than a first threshold in order to use an absolute signal strength, rather than a relative signal strength.

11. Regarding claim 5, Chheda discloses that the applying step moves a potential base station from the potentials list to the active list when the active list contains two or more base stations and the difference in magnitude between the base station with the strongest pilot signal and the potential base station is less than a second threshold (D3), the second threshold (D3) being less than the first threshold (D2) (col. 13, line 49-col. 14, line 2 and col. 15, lines 48-61). Chheda does not expressly disclose that the potential base station has a signal strength greater than a second threshold, the second threshold being greater than the first threshold. However, Chheda does disclose that the “determinations each include using the relative strengths of the pilot

Art Unit: 2665

signals in determining which connections to establish, which connections to maintain, and which connections to drop. Additional criterion could also look at the absolute strength of the pilot signals contained in the PSMM” (col. 8, lines 30-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the potential base station have a signal strength greater than a second threshold, the second threshold being greater than the first threshold, in order to use an absolute signal strength, rather than a relative signal strength.

12. Regarding claim 12, Chheda discloses that the first number is two or more, and the second number is 1 (col. 13, line 49-col. 14, line 2 and col. 15, lines 31-61).

13. Regarding claim 13, Chheda discloses that the first number is three or more, and the second number is 1 (col. 13, line 49-col. 14, line 2 and col. 15, lines 31-61).

*Allowable Subject Matter*

14. Claims 6, 8, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or fairly suggest adding the potential signal only if the signal strength of the potential base station is a third threshold greater than a signal strength of a base station in the active list. Rather, Chheda discloses initially ordering the signal strengths from strongest to weakest and then determining on which list to place a signal starting with the strongest signal (col. 15, lines 2-3) such that each potential signal strength must be weaker than signal strengths already in the active list since the strongest signal strengths have already been considered.

Art Unit: 2665

15. Claims 9 and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Conclusion*

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jung (USPN 6,049,716) see entire document which pertains to soft swapping base stations in a CDMA system. Padovani et al (USPN 6,151,502) see entire document which pertains to soft handoffs in a wireless communication system. Satarasinghe (USPN 6,192,246) see entire document which pertains to adjusting the conditions for handoff in a soft handoff system. Grob et al (USPN 6,360,100) see entire document which pertains to soft handoff in a wireless communication system. Jou et al (USPN 6,546,248) see entire document which pertains to the generation of PSMs in a soft handoff system. Soliman (USPN 6,055,428) see entire document which pertains to determining an active set in a soft handoff system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2665

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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